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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,659	12/17/2001	Hisashi Shoda	217360US0CONT	8520
22850	7590	03/31/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			ANGEBRANNDT, MARTIN J	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/015,659	<b>Applicant(s)</b> SHODA ET AL.	
	<b>Examiner</b> Martin J Angebranndt	<b>Art Unit</b> 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/19/2003 and 12/22/2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/19/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

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1. The response provided by the applicant has been read and given careful consideration.

Rejections of the prior office action, not repeated below are withdrawn based upon the amendment to the claims, specifically to the phenyl ring (limitations (1,2,3) and/or the perfection of priority. The rejection under 35 USC 112 is withdrawn.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 04-308791, in view of Okamoto et al. '023.

JP 04-308791, in comparative example 4, azo dyes 1 and 5 which are different in structure are in solution together with 3-hydroxy-3-methyl-butanone (HMB) as the solvent and then coated. In example 1 dyes 1,2 and 3 were mixed to form a recording layer coating solution and in example 2, dyes 4,5 and 6 were mixed to form a recording layer coating solution. . The examiner notes that examples 1 and 2 evidence solubility in the coating solvent and storage stability against crystallization as evidenced by 1. Similar results are demonstrated for examples 4-6,8 and 9 [0036-0037]. The examiner holds that exchange of the ligands occurs as these are ionic bonds to the central metals and at least some of the metal chelate dyes in the coated optical recording layer have different ligands attached to the same central metal as required by the claims

Okamoto et al. '023 teach azo dyes bounded by formulae in columns 6 and 7. These are disclosed as useful in optical recording media (2/12-21 and examples). The use of nitrogen

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containing rings fused to the phenyl moiety (B) which has a chelating moiety with an active hydrogen (X) is disclosed as preferred. (10/40-24/68). The examiner notes the dyes in columns 19 and 20, which have a thiazole moiety as ring (A).

The examiner holds that it would have been obvious to one skilled in the art to modify examples 1, 2, 4-6,8 and 9 of JP 04-308791 by replacing at least one of the dyes with a similar dye with a different ring B, such as those disclosed in columns 10 and 11 of Okamoto et al. '023, based upon the disclosure that these are preferable for azo containing dyes as disclosed by Okamoto et al. '023.

The applicant has submitted a declaration that shows good solubility for mixed ligand systems, relative to comparative example 4. The examiner is not sure what the difference is between these. It may be that the solutions are not given as much time to equilibrate, but this is not voiced in the declaration as there is no discussion of immediately coating the solution or allowing equilibration time in the declaration. The solubility aspect is addressed in the reference and the benefit seems to be achieved when only azo dyes are used. The solubility problem of these mixtures appears to occur when the azo dyes are mixed with the cyanine dyes. It is not clear from the evidence on the record, that there is a materials difference between the media with 6 hours to exchange and those which have had less time at the time of coating. The exchange will occur at a slower rate in the film than in the solution, but the equilibrium will be reached in either case. Clearly, the media of examples 1, 2, 4-6,8 and 9 of JP 04-308791 placed in the storage stability test with the high humidity and heat would reach the equilibrium relatively rapidly compared to media not heated.

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4. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 04-308791, in view of Okamoto et al. '023, further in view of Fujita et al. JP 11-181313, Meada et al. '419 and Kambe et al. EP 0887202.

Fujita et al. JP 11-181313 (machine translation attached) teaches azo dyes used in optical recording embraced by the formula II [0018]. The use of nitrogen containing rings fused to the phenyl moiety (B) which has a chelating moiety with an active hydrogen (X) is disclosed as preferred. [0015-0016].

Meada et al. '419 teaches azo dyes useful for optical recording, which have various moieties containing an active hydrogen (4/5-15).

Kambe et al. EP 0887202 disclosed mixed ligand systems with respect to dyes C-3 and C-4 on page 24 and C-29 on page 27. Sample 239, discloses that recording layers using dye C-29 have high reflectance, and modulation with low jitter and recording power relative to other compounds disclosed with ligands which are the same. (page 60). Examples 5 discloses that dyes C-3 and C4 function well. (62/36-41). Compounds C-26, and D-15 through D-20 use heterocyclic moieties and were used in examples 1 (58/9-28) and sample 236 (page 59). The disclosure of azo compounds bounded by formula (III) (page 4) where A is either an aromatic moiety with a pendant group bearing an active hydrogen or a nitrogen containing heteroaromatic moiety and B is an aromatic moiety with a pendant group bearing an active hydrogen. (24/35-43). Examples of A include pyridine, thiazole, benzothiazole, oxazole, benzoxazole, quinoline, pyrazine, and pyrrole rings. Active hydrogen containing groups are also disclosed. (7/25-31). The specific disclosure that the ligands may be the same or different is made. (8/15-16)

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In addition to the basis provided above for the combination of JP 04-308791 and Okamoto et al. '023, the examiner cites Fujita et al. JP 11-181313 to further buttress the position that these are preferable moieties for the ring B of JP 04-308791 and Meada et al. '419, to further support the position that the azo dyes of JP 04-308791 and Okamoto et al. '023 with the active hydrogen chelating groups are similar and considered equivalent within the azo art and Kambe et al. EP 0887202 to establish the knowledge of mixed ligand systems in azo based optical recording media and their benefits.

5 Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

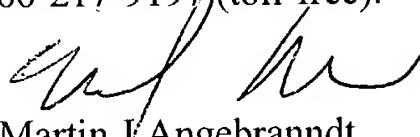
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Martin J. Angebranndt  
Primary Examiner  
Art Unit 1756

03/24/2004